

What is claimed is:

1. A method of treating, preventing, inhibiting, or modulating NF- κ B activation in a cell or in a subject which comprises administering at least one polyphenolic compound, an inhibitor of PKC δ translocation, an inhibitor of PKC ε translocation, or a combination thereof to the cell or the subject.
2. The method of claim 1, wherein the polyphenolic compound is rottlerin or a derivative thereof.
3. The method of claim 1, which further comprises administering a second polyphenolic compound to the cell or the subject.
4. The method of claim 3, wherein the second polyphenolic compound is selected from the group consisting of flavenoids, anthrocyanins, anthrocyanidins, isoflavones, catechins, epigallocatechin gallate, gallic acid, chlorogenic acid, curcumin, kaempferol, quercetin, isoquercitrin, myricetin, rutin, pelargonidin, cyanidin, delphinidin, peonidin, malvidin, malvin, oenin, cyanidin, kuromanin, diadzein, daidzin, genistein, genistin, tannic acid, caffeic acid, ferulic acid and traxol.
5. The method of claim 4, wherein the polyphenolic compound is quercetin, rutin, genistein, curcumin or trans-resveratrol.
6. The method of claim 1, which further comprises administering at least one inhibitor of a reactive oxygen species to the cell or the subject.
7. The method of claim 6, wherein the inhibitor is diphenylene iodonium, N-acetylcysteine, or Tiron.
8. The method of claim 1, which further comprises administering at least one antioxidant to the cell or the subject.

9. The method of claim 1, wherein the inhibitor of PKC δ translocation or the inhibitor of PKC ϵ translocation is a peptide.
10. The method of claim 9, wherein the peptide is δ V1-1 or ϵ V1-2.
11. A method of treating, preventing, or inhibiting a disease or disorder associated with NF- κ B activation in a subject which comprises conducting the method of claim 1.
12. The method of claim 11, wherein the disease or disorder is a cancer.
13. The method of claim 12, wherein the cancer is pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, kidney cancer, pancreatic cancer, colon cancer, thyroid cancer, melanoma, Hodgkin's lymphoma, acute lymphoblastic leukemia, acute myelogenous leukemia, diffuse large B-cell lymphoma, astrocytoma, glioblastoma, a head or neck cancer, or vulva cancer.
14. The method of claim 12, wherein the cancer is related to *in vitro* transformation of BCR-ABL, DBL/DBS, RAF, RAS, TEL-JAK2, or TEL-PDGFR.
15. The method of claim 12, wherein the cancer is related to viral oncogenesis caused by Epstein-Barr virus, hepatitis B virus, human herpesvirus-8, or human T-cell leukemia virus-1.
16. The method of claim 11, wherein the disease or disorder is an inflammatory disease.
17. The method of claim 16, wherein the inflammatory disease is pancreatitis, inflammatory bowel disease, asthma, arthritis, rheumatoid arthritis, asthma, psoriasis, cystitis, or nephritis.
18. The method of claim 11, wherein the disease or disorder is viral hepatitis, alcoholic liver disease, lung inflammation, Alzheimer's Disease, or atherosclerosis.
19. The method of claim 11, which further comprises administering at least one antiproliferative agent, at least one anti-inflammatory agent, or both.

20. The method of claim 12, wherein administration of the polyphenolic compound, the inhibitor of PKC δ translocation, the inhibitor of PKC ϵ translocation, or the combination thereof causes, induces, increases, or modulates cell cycle arrest, apoptosis, mitochondrial cytochrome c release, dissipation of mitochondrial polarity, caspase activation, mitochondrial permeability transition pore activation, or a combination thereof, in the cancer.

21. The method of claim 12, which further comprises administering a second polyphenolic compound, at least one inhibitor of reactive oxygen species, at least one inhibitor of PI 3-kinase, at least one inhibitor of NADPH oxidase, or a combination thereof.

22. The method of claim 21, wherein administration of the second polyphenolic compound, the inhibitor of reactive oxygen species, the inhibitor of PI 3-kinase, the inhibitor of NADPH oxidase, or the combination thereof causes, induces, increases, or modulates cell cycle arrest, apoptosis, mitochondrial cytochrome c release, dissipation of mitochondrial polarity, caspase activation, mitochondrial permeability transition pore activation, or a combination thereof, in the cancer.

23. The method of claim 12, wherein the polyphenolic compound is rottlerin.

24. The method of claim 23, wherein rottlerin inhibits non-oxidative deoxyribose synthesis, inhibits nucleic acid synthesis, induces cell cycle arrest, inhibits cell proliferation, increases oxidative metabolism of glucose, inhibits de novo fatty acid synthesis, chain elongation and desaturation from glucose, or a combination thereof, in the cancer.

25. A method of inducing apoptosis in a cell or making the cell susceptible to apoptosis which comprises conducting the method of claim 1.

26. The method of claim 25, wherein the cell is a tumor cell or a cancer cell.

27. The method of claim 26, wherein the tumor is a primary tumor.

28. The method of claim 26, wherein the tumor is metastatic.

29. A method of inhibiting non-oxidative deoxyribose synthesis, inhibiting nucleic acid synthesis, inducing cell cycle arrest, inhibiting cell proliferation, increasing oxidative metabolism of glucose, inhibiting de novo fatty acid synthesis, chain elongation and desaturation from glucose, or a combination thereof, in a cell which comprises contacting the cell with rottlerin.
30. A purified polypeptide sequence comprising SFNSYELGSLRQIKIWFQNRRMKWKK (SEQ ID NO:10), EAVSLKPTRQIKIWFQNRRMKWKK (SEQ ID NO:11), or LSETKPAVRQIKIWFQNRRMKWKK (SEQ ID NO:12).
31. A pharmaceutical composition comprising rottlerin and a pharmaceutically acceptable carrier.
32. The pharmaceutical composition of claim 31, and further comprising a second polyphenolic compound.
33. The pharmaceutical composition of claim 31, and further comprising an inhibitor of PKC δ translocation, an inhibitor of PKC ϵ translocation, or both.
34. The pharmaceutical composition of claim 31, and further comprising an inhibitor of a reactive oxygen species.
35. The pharmaceutical composition of claim 31, and further comprising an antioxidant.